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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/477,870	01/05/2000	CHIA-HONG JAN	042390.P5488	9851

7590

11/25/2002

DARREN J MILLIKEN  
BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP  
12400 WILSHIRE BOULEVARD  
7TH FLOOR  
LOS ANGELES, CA 90025

EXAMINER

OWENS, DOUGLAS W

ART UNIT PAPER NUMBER

2811

DATE MAILED: 11/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/477,870

Applicant(s)

JAN ET AL.

Examiner

Douglas W Owens

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 31-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 19, 2002 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 31-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 5,726,479 to Matsumoto et al.

Regarding claim 31, Matsumoto et al. teaches a gate electrode (Fig. 8) comprising:

an insulative layer (3);

a gate layer (4a);

thin first spacers (5) on opposite sides of the gate;

thick second spacers (7a) adjacent opposite sides of the thin first spacers; and

a conductive layer (9a) on the gate, said conductive layer extending beyond the edges of the gate and having a lower side at least as high as upper edges of the spacers.

Matsumoto et al. does not teach second and third thin spacers. It has been held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.

Regarding claim 32, Matsumoto et al. teaches a gate electrode, wherein the insulative layer is an oxide.

Regarding claim 33, Matsumoto et al. teaches a gate electrode, wherein gate layer comprises polysilicon (Col. 10, lines 10-14).

Regarding claim 34, Matsumoto et al. teaches a gate electrode, wherein the conductive layer comprises polycide.

Regarding claims 35 and 37, Matsumoto et al. teaches a gate electrode, wherein the thin spacers comprise an oxide (Col. 10, lines 18-20).

Regarding claim 36, Matsumoto et al. does not teach a gate electrode, wherein second thin spacers comprise a nitride. Nitride layers are well known in the art for use in spacers. It would have been obvious to one of ordinary skill to use silicon nitride since it is a known material that is well suited for the intended use.

Regarding claim 38, Matsumoto et al. teaches a gate electrode, wherein the thick spacer comprises a nitride.

Regarding claim 39, Matsumoto et al. teaches a gate electrode, wherein the polycide comprises  $\text{TiSi}_2$ .

### ***Response to Arguments***

4. Applicant's arguments filed August 19, 2002 have been fully considered but they are not persuasive.

The applicant asserts the new and unexpected results from forming additional thin spacers are that the spacers can be individually etched. It is not seen how this is relevant in claims that are drawn to an apparatus as opposed to a method of forming. Additionally, it would have been reasonably expected that additional spacers could be individually etched. The applicant has not fulfilled the burden of providing evidence to show that the results are unexpected and unobvious (*Ex parte Gelles*, 22 USPQ2d 1318; See also *In re Nolan* 553 F.2d 1261, 1267, 193 USPQ 641; *In re Eli Lilly*, 902 F.2d 943, 14 USPQ2d 1741;). Additionally, it has been held that expected beneficial results are evidence of obviousness thereof (*In re Gershon*, 372 F.2d 535, 538, 152 USPQ 602, 604).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas W Owens whose telephone number is 703-308-6167. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on 703-308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

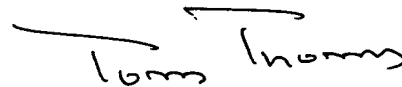
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

DWO  
November 20, 2002

A handwritten signature in black ink that reads "Tom Thomas". The signature is written in a cursive style with a horizontal line above the first name.

TOM THOMAS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800